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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,898

01/14/2005

Olivier J. Poncelet

84231JJH

7126

7590 06/20/2008  
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EXAMINER

JOY, DAVID J

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

06/20/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,898	<b>Applicant(s)</b> PONCELET ET AL.	
	<b>Examiner</b> David J. Joy	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/14/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "*means*" and "*said*", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Claim Rejections - 35 USC § 112*

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Independent Claim 1 is rejected because the specification, while being enabling for some specific aluminum concentrations that are less than 0.3 mol/l (i.e.,  $5.7 \times 10^{-2}$  mol/l,  $4.3 \times 10^{-2}$  mol/l, and 0.1 mol/l), does not reasonably enable all aluminum concentrations that are less than 0.3 mol/l. The specification does not enable a skilled artisan to make the invention commensurate in scope with these claims. The specification provides

some specific examples, as discussed above, but lacks examples below these particular values.

6. Claims 2-25 are rejected accordingly, as they all depend upon Claim 1.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Independent Claim 1 is rejected as being indefinite. A claim is indefinite if undue experimentation is involved to determine the boundaries of protection. This rationale is applicable to a polymer "*obtainable*" by a stated process because any variation in any parameter within the scope of the claimed process would change the polymer produced. One who made or used a polymer made by a process other than the process recited in a claim would have to produce a polymer using all possible parameters within the scope of the claim, and then extensively analyze each product to

determine if this polymer was obtainable by a process within the scope of the claimed process. See *Ex parte Tanksley*, 26 USPQ 2d. 1384 (Bd. Pat. App. & Int. 1991).

10. Additionally, Claim 1 is indefinite due to the recitation of the term "ambient" in Line 16 of the claim. The term "ambient" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and a skilled artisan would not be reasonably apprised of the scope of the invention claimed therein.

11. Claim 2 is indefinite due to the recitation that the alkali is "*selected from the group consisting a sodium, potassium, and lithium hydroxide, diethylamine, and triethylamine*". It is unclear, given the way that the claim is written (and punctuated), whether it is meant to recite sodium hydroxide, potassium hydroxide and lithium hydroxide, as well as diethylamines and triethylamines of all three of the alkali metals, or only specific compounds of the three alkali metals. Appropriate correction is required.

12. Claims 2-25 (in addition to the rejection of Claim 2 above, for other reasons) are rejected accordingly, as they all depend upon Claim 1.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Liu et al. (6,548,149; hereinafter "Liu") in view of the U.S. Patent of Poncelet et al. (5,916,946; hereinafter "Poncelet").

16. Liu teaches an ink jet recording element comprising a support and an ink jet receiving layer, and the ink jet receiving layer contains a polyvinyl alcohol binder and

an aluminosilicate polymer (see Abstract; see also Column 5, Lines 38-53; see also Column 6, Lines 55-63; see also Column 7, Lines 13-26; see also Column 10, Lines 45-55). Liu also teaches that the aluminosilicate used in the ink jet receiving layer has an Al/Si molar ratio of 1:4 (see Column 9, Lines 44-61), and that the use of the aluminosilicate results in the ink jet receiving layer having an enhanced gloss, an enhanced weathering resistance, and that the layer produces images having enhanced quality. However, Liu's teachings merely recite a general teaching that aluminosilicate can be used in the ink jet receiving layer to achieve these results. Poncelet, drawn to an organic/inorganic composite and photographic product containing such a composite, teaches a hybrid, organic/inorganic composite aluminosilicate polymer having an Al/Si molar ratio between 1 and 3, and an Al concentration between  $5 \times 10^{-4}$  and  $5 \times 10^{-2}$  mol/l (see Column 1, Lines 6-10; see also Column 2, Line 55 – Column 3, Line 9; see also Claim 1). Poncelet also teaches that the organic/inorganic composite aluminosilicate polymer can be used in image-receiving layers and products having these layers applied thereon, and that such layers exhibit enhanced performance characteristics (see Column 1, Lines 6-10; see also Column 3, Lines 50-65; see also Column 4, Lines 6-21). As both Liu and Poncelet are drawn to the same field of invention, it would have been obvious to a person having ordinary skill in the art at the time of invention to have made the ink jet



recording material taught by Liu and to incorporate the composite polymer taught by Poncelet.

17. As for the concentration of the aluminosilicate polymer in the ink-receiving layer, neither Liu nor Poncelet shows that the layer comprises between 5 and 95 percent by weight of hybrid polymer, as in Claim 23. However, such concentrations are properties which can be easily determined by a person having ordinary skill in the art. With regard to the limitation of such a broad range of the weight percent of the polymer present in the ink-receiving layer, absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. weight percents) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are optimizable as they directly affect the performance of the ink-receiving layer. It would have been obvious to a person having ordinary skill in the art, at the time of invention, to make the ink-receiving layer with the limitations of the polymer being present between 5 and 95 percent by weight of the hybrid polymer, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980).

18. Claims 1-22 are viewed as product-by-process claims and hence the methods that the aluminosilicate is created by are not pertinent, unless applicant can show a different product is produced, despite that fact that Liu recites that the inclusion of the aluminosilicate in the ink-receiving layer results in an ink jet recording material that has a high gloss, produces high quality printed images and has a good dye keeping time. Likewise, Poncelet recites that the use of the hybrid, organic/inorganic polymer can be used in image-receiving layers and products having these layers applied thereon, and that such layers exhibit enhanced performance characteristics. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

### ***Double Patenting***

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

20. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

21. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

22. Claims 1-22 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-3 and 5-23 of copending Application No. 2005/0238559. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter dealing with the hybrid aluminosilicate polymer's production that is claimed in the instant application is fully disclosed in the copending application and would be covered by any patent granted on that copending application since the claims found in both the copending application and the instant application are claiming common subject matter, as follows: a polymer obtainable by a method for preparing a hybrid aluminosilicate polymer comprising steps for treating a mixed aluminum and silicon alkoxide comprising both hydrolyzable substituents and a non-hydrolyzable substituent with an aqueous alkali, in the presence of silanol, stirring the mixture in the presence of silanol groups until a polymer is formed, and eliminating the byproducts from the reaction medium. Since the scope of the instant claims and the scope of the claims in the

compending application are overlapping, the claimed subject matter of the instant claims is not patentably distinct over the claims of the compending application.

23. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

24. Claims 1, 2, 4-7, 9-16 and 24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1 and 8-18 of compending Application No. 2006/0165921. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter dealing with the hybrid aluminosilicate polymer's production that is claimed in the instant application is fully disclosed in the compending application and would be covered by any patent granted on that compending application since the claims found in both the compending application and the instant application are claiming common subject matter, as follows: a polymer obtainable by a method for preparing a hybrid aluminosilicate polymer comprising steps for treating a mixed aluminum and silicon alkoxide comprising both hydrolyzable substituents and a non-hydrolyzable substituent with an aqueous alkali, in the presence of silanol, stirring the mixture in the presence of silanol groups until a polymer is formed, and eliminating the byproducts

from the reaction medium. Since the scope of the instant claims and the scope of the claims in the copending application are overlapping, the claimed subject matter of the instant claims is not patentably distinct over the claims of the copending application. The copending application also claims the addition of inorganic particles in the ink-receiving layer. However, the claims of the instant application also leave open the possibility that such particles could be added to the ink-receiving layer of the present invention, as it is claimed using open-ended “comprising” language.

25. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

26. Claims 1, 2, 4-16, 23 and 24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-17 of copending Application No. 2007/0054069. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter dealing with the hybrid aluminosilicate polymer's production that is claimed in the instant application is fully disclosed in the copending application and would be covered by any patent granted on that copending application since the claims found in both the copending application and the instant application are claiming common subject matter,

as follows: a polymer obtainable by a method for preparing a hybrid aluminosilicate polymer comprising steps for treating a mixed aluminum and silicon alkoxide comprising both hydrolyzable substituents and a non-hydrolyzable substituent with an aqueous alkali, in the presence of silanol, stirring the mixture in the presence of silanol groups until a polymer is formed, and eliminating the byproducts from the reaction medium. Since the scope of the instant claims and the scope of the claims in the copending application are overlapping, the claimed subject matter of the instant claims is not patentably distinct over the claims of the copending application. The copending application also claims that the support, upon which the ink-receiving layer is positioned, has additional layers other than the ink-receiving layer. However, the claims of the instant application also leave open the possibility that a multilayered support could be used, as the claims describe the presence of a support and the layer that is applied thereon, but they are claimed using open-ended "comprising" language.

27. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

28. Claims 1, 2 and 6-16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1, 6-9 and 12-18

of copending Application No. 2008/0097063. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter dealing with the hybrid aluminosilicate polymer's production that is claimed in the instant application is fully disclosed in the copending application and would be covered by any patent granted on that copending application since the claims found in both the copending application and the instant application are claiming common subject matter, as follows: a polymer obtainable by a method for preparing a hybrid aluminosilicate polymer comprising steps for treating a mixed aluminum and silicon alkoxide comprising both hydrolyzable substituents and a non-hydrolyzable substituent with an aqueous alkali, in the presence of silanol, stirring the mixture in the presence of silanol groups until a polymer is formed, and eliminating the byproducts from the reaction medium. Since the scope of the instant claims and the scope of the claims in the copending application are overlapping, the claimed subject matter of the instant claims is not patentably distinct over the claims of the copending application. While the copending application initially claims that the aluminum and silicon compounds have only hydrolyzable substituents, the dependent claims that depend upon the initial, independent claim, recite that the aluminosilicate can be a hybrid such that it is made up of aluminum compounds and silicon compounds having both hydrolyzable and non-hydrolyzable substituents.



29. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

30. As for the citations to the teachings contained in the specifications of the copending applications cited to hereinabove, Applicant's attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis). *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 622 (CCPA 1970). Consistent with the above underlined portion of the MPEP citation, the aforementioned references to the specifications of the instant applications are proper.

### *Conclusion*

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 2002/0085972	07/2002	Poncelet
US 6,254,845	07/2001	Ohashi et al.
US 5,888,711	03/1999	Poncelet et al.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Joy whose telephone number is (571)272-9056.

The examiner can normally be reached on Monday - Friday, 7:00 AM - 3:30 PM EST.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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/Milton I. Cano/  
Supervisory Patent Examiner, Art Unit 1794

/DJJ/  
Examiner, Art Unit 1794  
06/11/2008